

Notice of Allowability

Application No.

10/822,865

Applicant(s)

HUBERT JACOBUS CARPAIJ ET AL.

Examiner

Bernard E. Souw

Art Unit

2881

BM

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amdt 05/19/2005.
2. ☒ The allowed claim(s) is/are 1-22.
3. ☒ The drawings filed on 13 April 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Applicant's Amendment

1. The Amendment filed 05/19/2005 has been entered.
No claim has been amended or cancelled.
New claim 22 has been added.
Claims 1-22 are pending in this office action.
The present Office Action is made with all the arguments being fully considered.

ALLOWANCE

2. Claims 1-22 are allowed.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance:

A lithographic apparatus or method, comprising a first illumination system for providing a beam of radiation; a patterning device for imparting the radiation beam with a pattern; a projection system for projecting the patterned beam onto a target wafer; and a second illumination system for providing a compensating beam of radiation to a predetermined area on the substrate, the intensity of the compensating beam being varied across said predetermined area, as recited in claims 1 and 11, is neither anticipated nor rendered obvious by any prior art.

Claims 2-10 and 12-22 are also allowed because of its/their dependencies, either directly or indirectly, upon claims 1 or 11.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Relevant Prior Art

5. This prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) USPAT # 6,404,499 issued to Stoeldrijer et al. discloses a lithographic apparatus equipped with a compensation means/method for illumination non-uniformity across the target surface area. However, Stoeldrijer's compensation means/method does not make use of a second illumination system as claimed in the present invention, but uses the same illumination system/source with two compensation filters.

(b) USPAT # 6,607,863 issued to Irie discloses a lithographic apparatus equipped with a compensation means/method for illumination non-uniformity across the target surface area. However, Irie's compensation means/method does not make use of a second illumination system as claimed in the present invention, but uses the same illumination system/source with a matched density filter to correct the non-uniform exposure.

Art Unit: 2881

(c) USPAT # 6,777,140 issued to Singh et al. and USPAT # 6,765,712 issued to Van Dijsseldonk et al. disclose a lithographic apparatus equipped with a compensation means/method for illumination non-uniformity across the target surface area. However, both Singh's as well as Van Dijsseldonk's compensation means/method does not make use of a second illumination system as claimed in the present invention, but achieve illumination correction by effecting local changes in the phase and/or reflectivity of the projection mirror.

(d) USPGPUB 2003/0127607 issued to van der Veen discloses a lithographic apparatus equipped with a compensation means/method for illumination non-uniformity across the target surface area. However, both van der Veen's compensation means/method does not make use of a second illumination system as claimed in the present invention, but achieve illumination correction by locally increasing the exposure time or the intensity output of the illumination.

Communications

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard E Souw whose telephone number is 571 272 2482. The examiner can normally be reached on Monday thru Friday, 9:00 am to 5:00 pm..

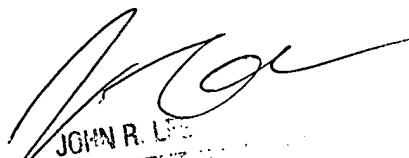
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571 272 2477. The central fax phone

Art Unit: 2881

number for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications as well as for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

bes
June 10, 2005


JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1000